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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,336	03/28/2001	Daniel F. Graves	P96040US1A/FIR 2 0020	4242

7590

03/03/2003

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EXAMINER

LU, C CAIXIA

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 03/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,336

Applicant(s)

GRAVES ET AL.

Examiner

Caixia Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-10 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2&3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. Applicant's IDS Form-1449 does not meet the requirement of MPEP 609, 37CFR 1.98 (b)(5) in that the disclosures under Other Prior Art are improper—the date, page or author are not properly disclosed for references AQ, AR, AS, BP, BQ, and BR.

Election/Restrictions

2. Applicant's election without traverse of Group I, Claims 1-10 in Paper No. 5 is acknowledged. It is noted during the examination that Claims 8 is directed to a process of making a polymer blend and, thus, should be restricted from Group I for the following reasons.

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I'. Claims 1-7 and 9-10, drawn to a process for preparation of a carboxylate terminated polymer, classified in class 526, subclass 173.

I". Claim 8, drawn to a process for making a polymer blend, classified in class 525, subclass 231.

The inventions are distinct, each from the other because of the following reasons:

4. Inventions I' and I" are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions, one for making a carboxylate terminated polymer and the other for making a polymer blend.

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5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. Because these inventions are distinct for the reasons given above and the search required for Group I' is not required for Group I'', restriction for examination purposes as indicated is proper.

7. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

8. During a telephone conversation with Attorney Scott McCollister on February 21, 2003 a provisional election was made with traverse to prosecute the invention of Group I', claims 1-7 and 9-10. Affirmation of this election must be made by applicant in replying to this Office action. Claim 8 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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11. Claim 2 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2

The format of the selective group for the conjugated diene is improper and the examiner suggest using Markush terminology which requires the phrase "selected from the group consisting of" and the connector "and" between the last two members of the selective group. See MPEP 2173.05 (h).

Claim 5

Polymer property such as "solution viscosity" is depended on the conditions at which the solution viscosity is measured and solution viscosity of the same polymer changes with conditions such as temperature, concentration and type of the solvents. Without specifying the conditions of the viscosity measurement, the magnitude of "solution viscosity" is not limiting.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hudson (US 3,791,888).

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The instant claims are directed to a process of manufacture of a baleable carboxylate terminated polymer comprising polymerizing at least one conjugated diene in the presence of an organolithium initiator to substantially completion and terminating the polymerization via addition of carbon dioxide.

Hudson teaches a process for the preparation of a polymer of a conjugated dienes by anionically polymerizing conjugated dienes such as butadiene and optional vinyl-substituted aromatic compounds such as styrene in the presence of organolithium initiator and terminating the polymerization with excess amount of carbon dioxide (col. 3, lines 12-33 and Example 1) to provide a carboxylate terminated polymer. Hudson also teaches that semisolid and solid terminally reactive polymer can be prepared having molecular weight up to 150,000 or higher (col. 4, lines 32-36). A skilled artisan would have understood that a semisolid or a solid polymer would be baleable.

Although Hudson does not expressly teach the solution viscosity and bulk viscosity of the butadiene polymer, Hudson's semisolid and solid polymers have molecular weights of up to 150,000 or higher (col. 4, lines 32-34) encompassing the molecular weight range of the polymer of the instant claims and are made by processes using catalyst compositions which are substantially identical to those disclosed in the instant specification. Therefore, a skilled artisan would have expected Hudson's semisolid and solid polymers to inherent have solution viscosity and bulk viscosity which encompass those of the instant claims.

Once a product appearing to be substantially identical is found and a 35 USC 102/103 rejection made, the burden of proof is shifted to the applicant to show an

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unobvious difference. In re Fitzgerald, 205 USPQ 594. In re Fessmann, 180 USPQ 324. Applicants have not met their burden to demonstrate an unobvious difference between the claimed product and the products of the prior art examples.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (703) 306-3434. The examiner can normally be reached on 9:00 a.m. to 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1193.



Caixia Lu, Ph.D.
Primary Examiner
Art Unit 1713

CL
February 24, 2003